

CLAIMS

What is claimed is:

1. A ingestible supplement for treating musculoskeletal disorders comprising per supplement:
 - 5 a. from about 250 mg to about 2500 mg of a member selected from the group consisting of 2-amino-2-deoxyglucose sulfate; 2-amino-2-deoxyglucose sulfate hydrochloride; n-acetyl 2-amino-2-deoxyglucose sulfate; and combinations thereof;
 - b. from about 40 mg to about 750 mg of acetyl myristoleate;
 - 10 c. from about 40 mg to about 800 mg of s-adenosylmethionine;
 - d. from about 200 mg to about 2000 mg of a protein;
 - e. from 100 mg to 2500 mg of a vitamin selected from the group consisting of Vitamin B, Vitamin C, Vitamin E, complexes thereof, and combinations thereof; and
 - 15 f. from about 1000 mg to about 9000 mg of a fiber.
2. The supplement of claim 1, wherein the supplement comprises from about 1000 mg to about 2000 mg by weight of the member selected from the group consisting of 2-amino-2-deoxyglucose sulfate; 2-amino-2-deoxyglucose sulfate hydrochloride; n-acetyl 2-amino-2-deoxyglucose sulfate; and combinations thereof.
- 20 3. The supplement of claim 1, wherein the supplement comprises from about 1200 mg to about 1500 mg by weight of the member selected from the group consisting of 2-amino-2-deoxyglucose sulfate; 2-amino-2-deoxyglucose sulfate hydrochloride; n-acetyl 2-amino-2-deoxyglucose sulfate; and combinations thereof.

4. The supplement of claim 1, wherein the protein is selected from the group consisting of a whey protein, soy protein, sodium casienate protein, legume protein, egg protein, and combinations thereof.
- 5 5. The supplement of claim 1, further comprising from about 0.1 mg to about 20 mg of a fatty acid.
6. The supplement of claim 5, wherein the fatty acid is a fatty acid derived from a member of the group consisting of pumpkin seed, almonds, sesame seeds, walnuts, flax seed, soy bean derivatives, and combinations thereof.
- 10 7. The supplement of claim 1, wherein the Vitamin B is selected from the group consisting of Vitamin B1, Vitamin B3, Vitamin B5, Vitamin B6, Vitamin B-12, and combinations thereof.
8. The supplement of claim 1, wherein the Vitamin C is selected from the group consisting of ascorbic acid, sodium ascorbate, potassium ascorbate, a calcium ascorbate with at least one threonate, and combinations thereof.
- 15 9. The supplement of claim 1, wherein the Vitamin E is selected from the group consisting of tocopherol, tocopheryl tocopheryl acetate, d-alpha tocopherol, d-alpha tocopheryl acetate, d-alpha tocopheryl succinate, complexes thereof, and combinations thereof.
10. The supplement of claim 9, wherein the Vitamin E comprises from about 200 mg to about 1000 mg per supplement.
- 20 11. The supplement of claim 1, wherein the fiber is selected from the group consisting of oat bran, a legume, a psyllium, a nut, a bean, pectin, and combinations thereof.
12. The supplement of claim 1, further comprising from about 1 mg to about 20 mg of a mineral selected from the group consisting of selenium, a boron, a manganese, a magnesium, or combinations thereof.
- 25 13. The supplement of claim 1, further comprising from about 1 mg to about 20 mg of a digestive enzyme.

14. The supplement of claim 13, wherein the digestive enzyme is selected from the group consisting of bromelain, pepsin, amylase, protease, lipase, cellulase, lactase, alpha-g, glucoamylase, invertase, malt diastase, pectinase, xylanase, bromelain, betain, trypsin, and combinations thereof.
- 5 15. The supplement of claim 1, further comprising from about 250 mg to about 1500 mg of a calcium selected from the group consisting of calcium carbonate, calcium citrate, calcium lactate, calcium gluconate, and combinations thereof.
16. The supplement of claim 1, further comprising from about 250 mg to about 1500 mg of Vitamin A.
- 10 17. The supplement of claim 16, wherein the Vitamin A is beta carotene.
18. The supplement of claim 16, wherein the Vitamin A is derived from fish oil.
19. The supplement of claim 1, further comprising from about 10 mg to about 500 mg of a bioflavonoid from the group consisting of quercetin, grape seed extract, and combinations thereof.
- 15 20. The supplement of claim 1, further comprising from about 250 to about 1000 mg of chondroitin.
21. A method for improving joint mobility in a subject in need thereof comprising the step of administering to the subject an amount of the supplement of claim 1.